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IMPACT ENERGY ABSORBER AND PROCESS

ABSTRACT

[0034] A tunable and reusable impact energy absorbing system and process includes a control structure comprising a sleeve having an outer surface fixedly attached to a chassis, a seal at each end of the sleeve, a magnetorheological fluid disposed between the seals, and a coil in proximity to the magnetorheological fluid, wherein the seal and the magnetorheological fluid are in sliding engagement with a support member, wherein the impact surface is fixedly attached to a support member. Varying the current to the coil alters the magnetic field upon the magnetorheological fluid, which can be used to tune the yield stress of the sliding engagement.